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Innovative Technology in Finance for Inclusive Growth

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ABSTRACT

Micro Finance is a form of financial development that has primarily focused on providing financial services to the poor. From thumb impression to signature and back to verifying everything with your thumb- the journey of an average Indian has come a full circle. Today, we can purchase groceries, get investment advice, buy investment products, buy insurance and even avail credit online. Nearly every aspect of one daily activities can be conducted digitally enabled by technological innovation which has pervaded every nook and corner of our lives. Access to credit is one of the biggest impediments to India's economic growth. There is a huge gap to fill on the credit side-whether it is financial inclusion or microfinance, the opportunity is large. Technology in digital finance will play an integral role in leveraging this opportunity.

Credit forms the backbone of an economy and acts as a Launchpad for the multiplier effect of money. Access to credit is one of the biggest impediments to India's economic growth. Traditionally, the banking system has been able to cater to only a fraction of the credit demand in the country. India is over banked at the top end of the market and underbanked at the bottom of the pyramid. Disparities between the social and physical infrastructure of the urban and rural areas are common to all countries. In India, they are a continuing source of concern and will become further aggravated unless innovative strategies are evolved to accelerate the development of rural infrastructure. A great transition is occurring in the rural sector with respect to digital services especially in the fields of financial services and information and communication technology.

Besides several major initiatives for the urban masses, Digital India Program has closely touched the lives of rural people. The government is taking several measures to ensure that its service reach out to the last mile. And one of the major initiatives planned under Digital India includes connecting the rural areas with high speed internet network. To make India a digitally

empowered nation, the government has decided to connect even the far flung areas through the internet. Thus the story of India's rural digitalisation can't be complete without mentoring the penetration of digital payments in the rural sectors using a variety of platforms including Unified Payment Interface, Paytm and Google Pay.

A noteworthy point with regard to the Indian digital payment is that it is being dominated by micro transactions, thus highlighting its adoption by people of all classes.

Keywords: technology, financial inclusion, innovation, digital, economic growth.

FULL PAPER SUBMISSION

INNOVATIVE TECHNOLOGY IN FINANCE FOR INCLUSIVE GROWTH

Introduction

Microfinance is a form of financial development that has primarily focused on alleviating poverty through providing financial services to the poor. Rutherford defines microfinance as, "the means by which poor people convert small sums of money into large lumpsums". In the late 1970s, the concept of microfinance had evolved. The main aim is to provide easy access to credit to the poor people who were neglected by the big financial institutions and banks.

Microfinance gives access to financial and non-financial services to low income people, who wish to access money for starting or developing an income generation activity. The individual loans and savings of the poor clients are small. Microfinance came into being from the appreciation that micro-entrepreneurs and some poorer clients can be bankable, that is, they can repay, both the principal and interest, on time and also make savings, provided financial services are tailored to suit their needs. Microfinance as a discipline has created financial products and services that together have enabled low income people to become clients of a banking intermediary.

Microfinance is not only about credit. It is as much about savings, remittance services and micro-insurance. In a way, even credit may be looked at as one's own savings made available at advance. There is need to put in place a workable system, technologically and managerially, for collecting savings from the poor in small amounts, at regular intervals and at their door step. Non-Banking Financial Companies and Microfinance Institutions network could devise a mechanism to deliver the money at their doorstep. There are, similarly, many upcoming technologies suitable for the rural poor. 'Gramteller', a rural ATM could be explored for their successful usability in rural areas. Introduction of smart cards is also expected to revolutionize the micro-finance sector and bring down the transaction costs.

Information and Communication Technology (ICT) can be effectively used to provide information about micro finance organizations and their services. Though many websites provide information on micro financing, there is lack of information on the terms and conditions, institutions that provides micro finance. This information can be provided both in English and also in other Indian languages.

Information and communication Technology can be effectively utilised to monitor the various micro finance activities. The various schemes implemented by the Department of Rural Development are monitored physically through various impact assessment studies. RURALSOFT is a software used to monitor the schemes on a monthly basis. At present assessments are done only up to district or block level because of the consolidated data. The information required to assess the schemes at the grass root level can be outsourced to the self help groups. This information can be feed into the Ruralsoft for detailed monitoring of the schemes.

According to data provided by Greenwich Associates, a provider of data analytics the traditional ways of banking approve only 25 percent to 40 percent of loan applications. A consumer below the age of 35 who may not have a credit history because he has never borrowed in the past. Then there may be a consumer who is 50 years of age but may have a low credit score because of less credit history. Both these borrowers might not be able to access credit through traditional banking channels. This largely stems from an inability to assess the credit worthiness of new-to-credit and small borrowers. Catering to small sections definitely demands alternate options within the financial domain. India is changing, small sectors are entering the mainstream. India need a more logical credit assessment structure which is capable of assessing the credit risk of this growing population.

As part of Digital India Initiative the government will be focusing on digital literacy and delivering government services through digital mediums. Introduction of low cost smart phones with internet connectivity in rural India will be a drastic change in future of the economy.

Thus the story of India's rural digitalisation can't be complete without mentoring the rural sectors penetration of digital payments in the rural sectors using a variety of platforms including Unified Payment Interface, Paytm and Google Pay.

Review of Literature

- Digital Lending Fintechs are targeting the unmet demand from Indian Micro, Small and Medium Enterprises as well as consumers for credit. For fast growing micro, small and medium enterprise community, fintechs are helping resolve the huge demand-supply mismatch by using technology to create new underwriting models that can adequately capture this risk of New-to-Credit and Micro, Small and Medium Enterprise borrowers.
- CRIF Highmark is one of the four RBI authorized credit bureau in India which provide personal and business credit scores. Commenting on an increase in digital data, Parijat Greg, Vice President, CRIF High Mark said, 'An increasing number of borrowers are coming through digital channels- this is giving rise to two separate data sets- traditional credit bureau data and alternative dataset in the form of digital footprint. The two together can allow lenders to know more about consumers, and be more prudent in the credit analysis.
- New classes of fintech firms have emerged including wealth tech and insurtech. Robo- advisors, digital brokerages, online investing tools and financial service software would all fall under the umbrella of wealthtech. The wealthtech industry in India is an innovative technology which solve investors unique needs. Especially wealthtech with its ability to service the bottom of the pyramid and drive financial inclusion is attracting a lot of interest- Bansal MD from Boston Consulting Group.
- While the overall internet penetration in India is 33 percent, it is only 16% in the rural areas, says a report released at the India Mobile Congress 2017. BharatNet will enable the country to generate online servers at rural sectors.

Source: Kurukshetra, Vol.66, March 2018 & Outlookmoney.com

Objectives

- To improve the quality of lives of rural sector and make them digitally literate.
- To enhance digital infrastructure to improve connectivity and information.
- To provide digital support for extending the mobile network into the remote rural areas to promote digital usage.

Methodology

The Archival research methodology is adopted. Archival Research is a method of collecting data from sources that already exist. It is the data which is purely obtained from secondary data collection.

Data Analysis

The Union Minister for Finance and Corporate Affairs Smt Nirmala Sitharaman presented the Union Budget 2019-20 before the parliament. The key highlights of Rural Development with regard to Digital Finance is:

Pradhan Mantri Gramin Digital Saksharta Abhiyan

- Over two crores rural Indians made digitally literate.
- Internet Connectivity in local bodies in every Panchayat under Bharat-Net to bridge rural-urban divide.
- Universal Obligation Fund under Public-Private Partnership arrangement to be utilised for speeding up Bharat-Net.

Digital Inclusion

To empower rural people digitally the Government has launched Pradhan Mantri Gramin Digital Saksharta Abhiyaan. The scheme aims at imparting digital literacy to citizens in rural area free of cost. The programme is a dynamic and integrated platform for digital literacy awareness, education and capacity building programmes that will help the rural and under-served communities fully participate in the global digital economy. With the announcement of the scheme, the Digital India Programme in rural India will get a further boost. According to the finance minister, as many as two crores rural Indian are now digitally literate as part of the Gramin Digital Saksharta Abhiyan and it is expected that as many as six crores rural household will be covered as part of the Abhiyan.

To make India a digitally empowered nation, the government has decided to connect even the far flung areas through the internet. Capital Quotient has launched a Payroll-Based Programme aimed at helping employees of small and medium sized enterprises in Tier II & III cities in India. IDFC Bank is their tech integration partner for nodal accounts.

The financial service sector which has been relatively slow in the adoption of technology has now suddenly taken to it. A huge opportunity lies at this crossroads of finance and technology and that opportunity is Fintech.

Fintech has adopted great digital adoption. The first step towards this was to solve for identity with Aadhaar. The next step was to ensure that every individual has a bank account or equivalent to store their money. The third leap was to build scalable platforms to move money and the final was to allow banks and fintechs access to a platform like Unified Payment Interface to innovate and co-create. A common tech platform like UPI, enabled innovation by bringing

together all stakeholders of the industry to co-create and flourish. With 60+ member banks and several large third party players offering payments using the platform. UPI is driving the growth of mobile payments in India.

Banks, financial institutions, fintechs and regulatory bodies need to work together to create an enabling environment for fintechs to thrive and serve the overall purpose of financial inclusion and customer satisfaction.

Chart No 1

Chart showing Mobile Account Usage in India

| Mobile Account | Population % 15+ million | | |
|----------------|---------------------------------------|------------|---------------------|
| | Gross National Income Per Capita (\$) | | |
| | Country Data | South Asia | Lower Middle Income |
| All Adults | 2.4 | 2.6 | 2.5 |

Chart No 2

Chart Showing Access to Financial Institutions

| Access to Financial Institutions | Population %, 15+ million | | |
|--|---------------------------------------|------------|---------------------|
| | Gross National Income Per Capita (\$) | | |
| | Country Data | South Asia | Lower Middle Income |
| Has Debit Card | 22.1 | 18.0 | 21.2 |
| Has Debit Card, 2011 | 8.4 | 7.2 | 10.1 |
| ATM is the main mode of withdrawal (% with an account) | 33.1 | 31.1 | 42.4 |
| ATM is the main mode of withdrawal (% with an account 2011) | 18.4 | 16.9 | 28.1 |

Chart No 3

Chart Showing the Digital Payments in the Past Years

Population %, 15+ million

| Digital Payments | Gross National Income Per Capita (\$) | | |
|--|---------------------------------------|------------|---------------------|
| | Country Data | South Asia | Lower Middle Income |
| Used a debit card to make payments | 10.7 | 8.5 | 9.6 |
| Used a credit card to make payments | 3.4 | 2.6 | 2.8 |
| Used the internet to pay bills or make purchases | 1.2 | 1.2 | 2.6 |

Source: Global Findex Data (wave 1 & 2) from datatopics.worldbank.org

Chart No 4

Chart Showing Venture Capital/Private Equity Funding

| Funding | Funding Value (\$mn) | No of Deals |
|-----------|-------------------------|-------------|
| Payments | 709 | 21 |
| Lending | 530 | 67 |
| InsurTech | 378 | 17 |
| FinTech | 11 | |
| Others | 122 | 23 |

Source: India FinTech Report 2019 by Medici

Chart No 5

Chart Showing Number of FinTech Startup by Segment

| Type | Number |
|-----------------------------|--------|
| Payment | 375 |
| Lending | 338 |
| WealthTech | 303 |
| Personal Finance Management | 169 |
| InsurTech | 108 |
| ResTech + Cyber Security | 58 |
| Other Segment | 684 |

Source: India FinTech Report 2019 by Medici

Chart No 6

Chart Showing Citywise Breakup of Fintechs

| City | Number of Startups |
|-----------|--------------------|
| Bengaluru | 432 |
| Mumbai | 428 |
| New Delhi | 196 |
| Hyderabad | 125 |

Source: India Fintech Report 2019 by Medici

Interpretations

- It is found that for the fast growing MSME community, fintechs are helping to resolve huge demand-supply mismatch by using innovative technology.
- It is found that a lot of data should be harnessed to make better lending decisions.
- It is found that digital brokerages, online investing tools and financial services software would all fall under the umbrella of wealthtech.
- It is found that collaboration of banks, financial institutions and regulatory bodies is essential to solve larger problems in rural sectors.
- It is found that fintech identifies the inclusive areas and then build custom solutions to alleviate the digital financial problems.
- It is found that Unified Payments Interface is driving the growth of mobile payments in India.
- It is found that our country is overbanked at the top level and underbanked at the bottom level. There is a huge gap to fill on the credit side, whether it is financial inclusion or microfinance.
- It is found that there is a increasing number of borrowers coming through digital channels for availing credit.

- It is noted that wealth tech has the ability to service the bottom of the pyramid and drive financial inclusion thereby accessing credit facility to small borrowers.
- It is noted that there is an increased adoption of mobile and digital channels available which can bring a thumping result if introduced in inclusive sectors with proper guidelines.

Recommendations and Suggestions

- It is recommended that structured attempt by the Government should be made to perpetuate digital adoption. The first step is to confirm identity with Aadhaar, then have a bank account, have platform like Unified Payment Interface to move money and to innovate technology.
- It is recommended that digital markets should be expanded and reach out to the inclusive sectors.
- It is suggested that innovative technology must be used for filling up a huge gap in the lending space which banks are unable to fill.
- It is recommended that there should be a sound advisory and executive services available for sourcing of investment options and viability of credit.
- It is suggested that there should be transparency and reduction in intermediary cost, when dealing in digital finance.
- It is suggested that high speed internet network should be provided to solve many problems for rural India.
- It is recommended that blockchain technologies be considered for establishing digital economy.

Limitations

- It is expensive.
- Digital literacy rates too low.
- There are chances for online fraud.
- If digital data is lost financial transactions are disrupted.

Conclusion

To make India a digitally empowered nation, the government has decided to connect even the far flung areas through the internet. The government has also shown its intent to explore the use of Blockchain Technologies for establishing digital economy. The use of this transformational technology is already been considered in the banking and finance industries. Even the inclusive sector has a huge scope of transformation through Blockchain.

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